Will submit to St. per call to Ed Patterson M.T.M. 9/16/81

Form 9-331 C (May 1963)

Didn't Know

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved. Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER; SINGLE ZONE [ ] MULTIPLE ZONE [X]

2. NAME OF OPERATOR: Vortt Exploration Company, Inc.

3. ADDRESS OF OPERATOR: P.O. Box 26089, Fort Worth, Texas 76116

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface 1709' 566'
~~1708.99'~~ FEL ~~415.6'~~ FSL
At proposed prod. zone
~~1708.99' FEL 415.6' FSL~~

5. LEASE DESIGNATION AND SERIAL NO.: U-15179

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME: Link Canyon

8. FARM OR LEASE NAME: 23215

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 23, T21S, R5E, SLB & M

12. COUNTY OR PARISH: Sevier

13. STATE: Utah

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: approximately 5 miles NW Emery, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 415.60'

16. NO. OF ACRES IN LEASE: 2560

17. NO. OF ACRES ASSIGNED TO THIS WELL: 320

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: ----

19. PROPOSED DEPTH: 5700'

20. ROTARY OR CABLE TOOLS: Potary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 8640'GL

22. APPROX. DATE WORK WILL START*: July, 1981

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 3/4"	10 3/4"	40.5#	200'	100 sacks
9 5/8"	7 7/8"	26.40#	2400' if needed	125 sacks
6 1/4	4 1/2"	10.50#	5700'	175 sacks

Selectively perforate and fracture the Ferron and Dakota Formations with 20,000 gal. of jelled weak acid and 200 sacks of 20-40 sand.

This gas is not dedicated.

The E/2 of Section 23 is dedicated this well.

RECEIVED
AUG 31 1981

A 3000 psi working pressure and 5000 psi test blowout preventer will be used. Diagram attached hereto.

DIVISION OF
OIL, GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED W. L. Andrews, Jr. TITLE Geologist DATE

(This space for Federal or State office use)

PERMIT NO. APPROVAL DATE

APPROVED BY FOR E. W. GUYNN DISTRICT OIL & GAS SUPERVIOR TITLE FOR E. W. GUYNN DISTRICT OIL & GAS SUPERVIOR DATE AUG 2 8 1981

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED
TO OPERATOR'S COPY

NOTICE OF APPROVAL

*See Instructions On Reverse Side

FLARING OR VENTING OF GAS IS SUBJECT TO NTL 4-A DATED 1/1/80

State O & G.

Identification No. 481-81

United States Department of the Interior
Geological Survey
Oil and Gas Operations
2000 Administration Building
1745 West 1700 South
Salt Lake City, Utah 84104

NEPA CATEGORICAL EXCLUSION REVIEW

PROJECT IDENTIFICATION

Operator/Project Name VORTT EXPLORATION COMPANY, INC. / LINK CANYON UNIT No. 1

Project Type GAS WELL

Project Location 1709' FEL, 566' FSL SEC. 23, T21S, R5E

Date Project Submitted 6-5-81 (REVISIONS SUBMITTED 6-22-81)

FIELD INSPECTION Date JULY 7, 1981

Field Inspection Participants

GEORGE DIWACHAK	USGS
JOHN NIEBERGALL, STEVE ROBINSON	USFS
BRENT BARLEY, CARTER REED, JERRY GLEDHILL	USFS
ED PATTERSON, W.L. ANDREWS JR	VORTT
EVAN HANSEN	AMERICAN COAL ENG.
JOHN NELSON, WAYNE NELSON	NELSON CONST.

I have reviewed the proposal in accordance with the categorical exclusion review guidelines. This proposal would not involve any significant effects and, therefore, does not represent an exception to the categorical exclusions.

AUG 21 1981
AUG 26 1981
Date Prepared

George V. Diwachak
Environmental Scientist

I concur

8/26/81
Date

District Supervisor

CATEGORICAL EXCLUSION REVIEW INFORMATION SOURCE

Criteria 516 DM 2.3.A	Federal/State Agency: Correspondence (date)	Federal/State Agency: Phone check (date)	Federal/State Agency: Meeting (date)	Local and private correspondence (date)	Previous NEPA	Other studies and reports	Staff expertise	Onsite inspection (date)	Other
1. Public health and safety	1 (8-24-81) ↓						6	6 (7-7-81) ↓	4, 8
2. Unique characteristics	1					2	6	6	4, 8
3. Environmentally controversial	1						6	6	4, 8
4. Uncertain and unknown risks	1					2	6	6	4, 8
5. Establishes precedents	1						6	6	4, 8
6. Cumulatively significant	1						6	6	4, 8
7. National Register historic places	1								4
8. Endangered/ threatened species	1								
9. Violate Federal, State, local, tribal law	1						6	6	4, 8

CATEGORICAL EXCLUSION REVIEW COMMON REFERENCE LEGEND

1. Surface Management Agency Input INCLUDING ENVIRONMENTAL ASSESSMENT PREPARED FOR APD
2. Reviews Reports, or information received from Geological Survey (Conservation Division, Geological Division, Water Resource Division, Topographic Division)
3. Lease Stipulations/Terms
4. Application Permit to Drill
5. Operator Correspondence
6. Field Observation
7. Private Rehabilitation Agreement
8. RECOMMENDED STIPULATIONS

LINK Canyon # 5
VORTT

RECOMMENDED STIPULATIONS

1. ALL STIPULATIONS PRESENTED IN THE U.S. FOREST SERVICE ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED ACTION SHALL BE ADHERED TO. A thru V

2. THE LOCATION WILL BE MOVED 150 FEET NORTH TO MAKE BETTER USE OF EXISTING TERRAIN

3. THE LOGGING SUITE SHALL INCLUDE A GAMMA RAY LOG THROUGH THE COAL ZONE OF THE MESAVERDE FORMATION (APPROXIMATELY 800 - 1000 FEET OF DEPTH) REGARDLESS OF WHETHER THE INTERMEDIATE CASING STRING IS SET BEFORE LOGGING

4. All POTENTIAL FRESH WATER AQUIFERS DISCOVERED FROM SURFACE TO THE MANCOS FORMATION MUST BE ADEQUATELY ISOLATED AND PROTECTED.

United States Department of Agriculture — Forest Service — Manti-LaSal N.F.

Reply to: 2670 Threatened and Endangered Plants and Animals — Date: July 29, 1981

Subject: Vortt Exploration Company Drill Sites

To: District Ranger, Ferron R.D.
Attention: Steve Robison

The following proposed oil and gas drill sites were checked on the ground July 13 and 18, 1981, for T&E plants or their habitats:

Vortt Exploration Co.	Link Canyon
Vortt Exploration Co.	Mill Canyon
Vortt Exploration Co.	Indian Creek

There are no presently listed or sensitive plant species or their habitats located on or near these proposed drill sites. These sites are cleared for T&E plants.

Robert M. Thompson

ROBERT M. THOMPSON
Range Conservationist

cc: R. Thompson
C. Reed

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Manti-LaSal National Forest
599 West Price River Drive
Price, Utah 84501

2820

August 24, 1981

Mr. Edgar W. Guynn
USGS - 2000 Administration Bldg.
1745 West 1700 South
Salt Lake City, Utah 84104

Dear Mr. Guynn:

Enclosed for your information is an approved Environmental Assessment for Vortt Exploration Company's Link Canyon Unit #1 Wildcat Well on the Manti-LaSal National Forest.

The approved Environmental Assessment is our concurrence for approval of the operation as long as the mitigations identified in the Environmental Assessment and accompanying Transportation Report and Road-Use Permit (Appendix) are followed.

If you need any more information, please contact Carter Reed at our Supervisor's Office in Price, Utah.

Sincerely,

for
REED C. CHRISTENSEN
Forest Supervisor

Enclosures

RECORD OF DECISION
AND
FINDING OF NO SIGNIFICANT IMPACT

Vortt Exploration Co., Inc.
Wildcat Oil and Gas Well
Pines Area, Sevier Co., Utah

An Environmental Assessment (EA) that discusses the anticipated impacts associated with Vortt Exploration's oil and gas well in the Pines area, Sevier County, Utah. (T. 21 S., R. 5 E., Sec. 23, SLM) is available for public review at the Ferron Ranger District in Ferron, Utah, and at the Forest Supervisor's Office in Price, Utah.

It is my decision, based on the assessment and evaluation described in the EA, that the proposed project be allowed as described with the mitigations. The mitigations (management requirements and constraints) are on pages 4-6 of the EA.

I have determined through the EA that this is not a major Federal action that would significantly affect the quality of the human environment; therefore, an Environmental Impact Statement is not needed. This determination was made considering the following factors:

1. There are no wetlands, prime or unique rangelands, timberlands or farmlands, wilderness or further planning areas, alluvial valley floors, known threatened or endangered plants or animals, archaeological or paleontological values, or flood plains associated with this proposal.

2. There are no apparent adverse cumulative or secondary effects.

3. The approval of the project is consistant with the Ferron-Price Land Management Plan.

4. The identified issues, concerns and impacts can be effectively mitigated.

Recommended for Approval by: John Niebergall Date 8-18-81
JOHN NIEBERGALL, Ferron District Ranger

Approved by: Reed C Christensen Date 8/24/81
REED C. CHRISTENSEN, Forest Supervisor

ENVIRONMENTAL ASSESSMENT
VORTT EXPLORATION CO. INC.

Wildcat Oil and Gas Well
Pines Area; Sevier Co., Utah
Manti-LaSal National Forest

Prepared By:
Steven F. Robison
District Geologist
August 5, 1981

Approved By: John Niebergall Date 8-18-81
JOHN NIEBERGALL, District Ranger

I. PURPOSE AND NEED FOR ACTION

Vortt Exploration Co. Inc. of Fort Worth, Texas has submitted an application for a permit to stake (1-14-81) and an application for a permit to drill an exploratory oil and gas well in the Pines, Sevier County, Utah (submitted 6-5-81). Vortt is the designated operator of an approved Unit Agreement (Link Canyon Unit) that covers the area of this proposed drill site; this well will be the test hole for the unit. The site is in the SW¼ SE¼, Sec. 23, T21S, R5E, SLM (see attached map). The joint on-site with the U.S. Geological Survey, the Forest Service and Vortt was held 7-7-81. Vortt would like to begin road work and site work on 8-15-81 and move the drill rig in on 8-31-81. They anticipate drilling to be completed 30 days from when it starts. The proposed well is a wildcat well; any production facilities or structures would be covered in a separate Environmental Assessment(s). The existing road may not be adequate if the well is a producer.

A. Issues, Concerns and Opportunities

The following issues and concerns were identified for this project by the Interdisciplinary (ID) Team:

1. Soils

   Soils contamination and soil losses could occur with the drilling of this well.

2. Wildlife

   The proposed drill site and access road are in big game winter range.

3. Vegetation

   Loss of vegetative production on the site (roughly 2 acres).

4. Fire

   Drilling and the associated activities increase the chances of man-caused fires.

5. Visual Resources

   Trash, supplies, drilling materials or equipment, etc. could be left on the site or along the access road.

6. Public Safety and Recreation

   The oversized loads associated with the move/in-move/out of the drill equipment could be hazardous on the narrow, windy access roads.

7. Range

Damages to range improvement structures (fences, cattleguards, ponds, etc.) and gates left open could hinder proper range management. Using water from developed livestock sources for drilling could eliminate that water for it's intended uses.

8. Transportation

Access roads could be severly damaged if traveled in wet road conditions. A loss of the fines from the road surface (as dust) could occur as well as damage to existing culverts.

The anticipated impacts to the following resources were considered to be insignificant or non existant by the ID Team: special uses, minerals, timber, roadless characteristics, fish, water, and air quality.

II. ALTERNATIVES

A. Proposed Action

Vortt Exploration Co. has proposed to drill an exploration oil and/or gas well in the Pines area of the Muddy Creek drainage (see attached map and Application for Permit to Drill). Pre-onsite investigations of the area were held with Forest Service personnel (Steve Robison and Brent Barney) and Vortt representatives in an attempt to select the most desirable site for both groups. The site was moved 150 feet to the north during the joint on-site with the US Geological Survey, Forest Service, Vortt, the engineering firm and dirt contractor to a more suitable location (on-site was held July 7, 1981).

The site is in planning unit A-8 of the Ferron-Price Land Management Plan. Oil and gas leasing and exploration may be done in this planning unit.

Access to the proposed drill site will be via I-70 in Salina Canyon, the Convulsion Canyon Coal Mine Road (State Road) to Acord Lakes, then across the Fishlake NF on roads #40150 and 40007 to Forest boundary. Quitchumpah road #50007 and Link Canyon road, #50044 will be used on the Manti-LaSal as well as a short stretch of existing two track road. Construction of new roads will not be necessary in connection with this project. Some gates may need to be widened to allow passage of the oversize loads.

A total of about 2 acres would be disturbed by drilling this well.

B. Alternative Formulation Criteria

The following Alternative Formulation Criteria were developed for this project by the ID Team:

1. Any alternative must be consistant with the Ferron-Price Land Management Plan.

2. Any alternative must be consistant with all applicable State and Federal laws and regulations.

3. Any alternative drill site should make the best use of existing roads.

4. No drill sites will be permitted on slopes in excess of 25 percent.

5. Any alternative drill site will provide reasonable access to the leasee to drill the targeted geologic structure.

C. Alternative Evaluation Criteria

Only one alternative meets the Formulation Criteria; therefore no Evaluation Criteria are necessary.

D. Alternatives Considered

Three alternatives were considered by the ID Team for this project: the "No Action" alternative, alternate drill site alternative, and the project as proposed with mitigations.

1. No Action

Assessment of the "No Action" alternative is required by CEQ Guidelines(Federal Register, November 29, 1979). Under this alternative permission to drill would not be given and drilling would not take place. This alternative is not viable because the lease holder or operator has a right to drill if an acceptable location exists on the lease; the site chosen is acceptable.

2. Alternate Drill Site

The use of an alternate drill site was considered but not evaluated. An alternate drill site (site other than the one proposed) would probably not allow Vortt to drill their targeted geologic structure, and could not make better use of existing roads (no new access road construction is required for the proposed site), if they were allowed to drill the geologic structure. This alternative was therefore considered to not be a viable alternative by the ID Team.

3. Project as Proposed with Mitigations

Investigations of the Pines area were made to try and locate a suitable drill site and access road. The site was moved 150 feet north during the joint on-site to better adopt the site to the drill pad layout. The site selected is an acceptable location from a surface management standpoint. The following management requirements and constraints (mitigating measures) must be considered as part of the project as proposed:

a. All topsoil will be removed and stockpiled before drill pad construction.

b. All contaminated gravel and soil will be placed in the pit and buried at the conclusion of drilling or hauled off the Forest and disposed of properly.

c. A berm will be constructed around the drill pad area to contain all fluids on the pad (see "Guidelines for Oil and Gas Operations").

d. The pad surface will be sloped to drain into the pits.

e. All brush removed on the site will be piled, and will be scattered back on the site after it has been reseeded.

f. All large rocks and boulders (including those that were blasted during construction of the pits) are to be piled and placed back into the pits at the conclusion of drilling.

g. All drilling and associated activities must stop when the big game move into their winter range, about Nov. 15. This date may be modified by the District Ranger.

H. The site will be reseeded immediately after the topsoil has been redistributed with the following seed mix:

Intermediate Wheatgrass (Agropyron intermedium)	3 lbs.
Slender Wheatgrass (Agropyron tsachycaulum)	3 lbs.
Pubescent Wheatgrass (Agropyron trichophorum)	3 lbs.
Crested Wheatgrass (Apropyron cristatum)	2 lbs.
Hard Fescue (Festuca ovina duriscula)	1 lb.
Yellow Sweet Clover (Melilotus alba)	1 lb.
Ledak Alfalfa (Medicago sativa var ladak)	1 lb.
Small Burnet (Sanguisorba minor)	1 lb.
Total	15 lbs./acre

i. Fire fighting tools must be available at the drill site at all times and shall consist of axes and shovels (one per crew member) and two backpack pumps or two fire extinguishers.

j. All trash must be properly stored, ie. in garbage bins or cages. All trash, supplies, drilling materials, equipment etc. shall be cleaned up within one week after the site rehab is completed and hauled off the Forest and disposed of properly.

k. All damages to fences, cattleguards, developed water sources or to other range improvements must be repaired immediately.

l. No water will be taken from developed springs or troughs for drilling or related activities. Water arrangements must be made with the State Engineer and the appropriate irrigation company. The Forest Service must approve all water developments.

m. All vehicular travel will be restricted during wet road conditions to prevent road damage. All damages to roads or associated sturctures will be repaired by the permittee.

n. The access roads will be watered if and/or when necessary.

o. All fluids must be adequately contained in the pit to prevent contamination of soils, groundwater and surface water.

p. A road use permit is required prior to moving heavy equipment onto Forest Service land; all stipulations in the road use permit must be followed (see attached road use permit and engineering report).

q. The site plan must be approved by the Forest Service prior to any surface disturbance.

r. No move in-or move out of the drill rig will be permitted on weekends, holidays or openings of hunting seasons.

s. The reclaimed area will be fenced with 4 strands of barbed wire until the vegetation is re-established.

t. The disturbed areas must be fertilized prior to reseeding.

u. Additional road work will be necessary if operations continue into the wet season (after Oct. 1). This date may be modified depending on weather conditions.

v. A road use permit from the Fishlake National Forest will be required for those portions of the access roads on the Fishlake National Forest.

III. Affected Environment

A general description of the environment can be found in the Ferron-Price Land Management Plan, planning unit A-8. There are no known listed or proposed threatened or endangered plants or animals, wilderness or further planning areas, floodplains, alluvial valley floors, prime or unique farmlands, rangelands or timberlands, wetlands associated with this project nor will there be anticipated impacts to archaeological or paleontological values.

A. Soils

Soils at the proposed drill site are sandy to sandy loam, and are in some places absent as bedrock outcrops are present. The soils are generally shallow (less than 3 feet), dry and have a low organic content. Rehab potential for the site is low to moderate.

B. Wildlife

The area of the drill site and access roads is used extensively by deer and elk as winter range. The big game use the area from about Nov. 15 through April 15, depending on the snow situation. Grouse, bobcat and cougar are the only other game species present in the immediate area. Numerous non-game species of mammals, birds and reptiles are also present.

C. Vegetation

The proposed drill site has predominantly sagebrush, with some grasses present. One small ponderosa will have to be removed for the drill site. Aspen are present near the site.

D. Fire

The area of the proposed drill site becomes very dry and hot in the summer and fall months. The increased human activity associated with the drilling will increase the chances of man-caused fires.

E. Visual Resources

The visual quality objective for the drill site is maximum modification. The area has little recreation use, but trash or drilling materials left on the site would not meet the visual quality objective.

F. Range

The proposed drill site lies within the Emery Cattle and Horse Allotment. This allotment has been determined to be in poor condition but with an upward trend. Scarce water supplies make proper management difficult. Range improvements, troughs, ponds, fences, cattleguards, etc. are present and essential to proper range management.

G. Transportation

Quitchumpah road #50007 and Link Canyon road #50044 and a short distance of existing non-system road will be used as access for this project (roads on the Fishlake NF will be covered in a Road Use Permit issued by the Fishlake NF). These roads are of native materials. In many places bedrock outcrops in the roads, making the running surface rough. Very thin cover over the sandstone is also present in many places. These roads can become very slippery when wet, and rut easily (when the bedrock cover is thick). A few culverts are present in the roads.

IV. Environmental Consequences

A. Effects of Implementation

All issues and/or concerns can be effectively mitigated. About two acres of land surface will be disturbed by this project and taken temporarily out of vegetative production. However, the site will be reclaimed.

B. Evaluation of Alternatives

No evaluation of alternatives is necessary because only one viable alternative was identified by the ID team.

V. List of Preparers

The ID team consisted of the following Ferron Ranger District personnel:

John Niebergall	District Ranger
John Erickson	Wildlife Biologist
Bill Dye	Forester
Steve Robison	Geologist, ID Team Leader
Jerry Gledhill	Geologist

Consultation from other than the ID team came from the following:

Robert Thompson, USFS, Threatened and Endangered Plant (T & E) Specialist. Mr. Thompson gave clearance for T & E plants.

Ed Patterson, Vortt Exploration Co. Mr. Patterson described several of the physical aspects of the proposed drilling program.

Diana Christensen, Utah Archaeological Research Corp., archaeologist. Ms. Christensen conducted an archaeological and historical inventory of the site and gave clearance for this proposed project (see attached report).

Darrel Hintze, USFS, Fishlake National Forest. Mr. Hintze discussed the road use permit for access roads on the Fishlake National Forest with Vortt representatives.

VI. Appendix

1. Map
2. Engineering transportation technical report
3. Road Use Permit
4. Archaeological Report
5. Vortt's Application for a Permit to Drill

VORTT EXPLORATION
PINES AREA

I. INTRODUCTION

A. The proposal is to drill a gas/oil exploration well, in the Pines Area of Ferron District, in the SW¼ SE¼ Section 23, T21S, R5E, SLC B&M, to a depth of approximately 5,700 feet. This requires locating an area for a drill site that can be graded to provide a level pad, 300 feet by 300 feet, and provide access for the drilling and supplying equipment to the drill site. The Pines area provides ample opportunity to locate a relatively flat site for a drill pad, while the shallow location of bedrock could present some difficulty with grading the site.

Drill rig movement will require from 16 to 18 commercial truck loads both way. Additional supplies will require approximately 20 commercial truck loads.

The primary access to the Pines Area is from the Convulsion Mine road. The access would use the following Forest Development Roads, (1) the Duncan Mountain Road #40007 on the Fishlake National Forest for 12.8 miles (2.5 miles outside the boundary and 10.3 miles within the boundary), (2) the Quitchumpah Road for 4.15 miles, and (3) the Link Canyon Road for 1.7 miles. In addition, 0.45 miles of non-system road will be used.

The system roads on the Manti-LaSal National Forest are collector roads. The average daily traffic use is 10 vehicles per day, with peak traffic of 50-100 vehicles per day.

Road use consists of permittee's, recreation vehicles and administrative traffic. A small quantity of timber has also been hauled over segments of the road.

B. Alternative Formulation Criteria

1. Facilitates completion of the remainder of the transportation system.

2. Meets safety requirements.

3. Meets standards for design.

4. Provides reasonable access to the proposed geological structure.

C. Alternative Evaluation Criteria

1. Meets traffic requirements of the exploration, plus existing traffic use.

2. Prevents damage to resources by lessening the area impacted.

3. Lowest possible cost of transportation (environmental, construction, maintenance, and user cost).

D. Issues, Concerns, and Opportunities

1. Concerns exist that the areas on either side of the existing road could be damaged if vehicles leave the travelway in rocky sections in order to avoid the jarring inherent with unsurface road on bedrock.

2. Opportunity exists to correct the steep pitches and sharp horizontal curve on the crest vertical curve just within the Manti-LaSal boundary. The horizontal curve needs increase in radius and turnout construction to provide safe sight distance and vehicle turnoffs.

3. Opportunity exists to replace the damaged and inadequate (width) cattleguards. The Forest Service has planned to replace the cattleguards with new cattleguards and foundations of adequate width. The materials have been purchased or constructed and are available for installation. The installation is not planned in the maintenance schedule for this year. These cattleguards should be installed by the user where they facilitate the movement of his traffic and significantly reduce the need to construct or widen bypass roads and gates.

II. AFFECTED ENVIRONMENT

The Quitchumpah Road #50007, is a single-lane road with poorly defined turnouts. The road has a width of 12-14 feet and the gentle slopes and limited vegetation allows for adequate sight distance and pull-offs throughout most of the length.

The first 0.2 mile of the road is substandard for the movement of heavy drill trucks and provides inadequate sight distance for present use. A short pitch (+8%) ends on a combination crest vertical and 50'-60' radius horizontal curve through a hog-back ridge.

The remaining portion of the road follows along the cap rock. The soils within the roadway vary from three feet thick to non-existant. Seven drainages are crossed, with only three having culverts and four being fords. The fords are in bedrock. The road intersects four cattle allotment fences. Each crossing has a cattleguard and bypass gate in place. Two of these cattleguards are 10 feet wide, one is 12 feet wide, and one is 14 feet wide. The bypass gates vary from 10 feet to 14 feet wide.

The portion of the Link Canyon Road #50044 to be used for the operation is 10 to 14 feet in width and across the cap rock. The soils on the first mile are thin - less than three feet in most areas, and the last three-fourths mile has almost no cover over the cap rock. The topography is gentle and the vegetation light, allowing for adequate sight distance. No drainage facilities, other than dips, or fence lines are in place.

Approximately one-half mile of unspecified road system with width of 10 to 12 feet will also be used. The vegetation is somewhat heavier in this area and some clearing for turnouts could be needed.

III. ALTERNATIVES

A. Considered but not Evaluated

1. Use of existing Forest Development Roads No. 50007 and 50044 without improvments. This alternative was not evaluated because it would not provide a safe route without improvement to the first quarter mile of road No. 50007 and gates or cattleguards cannot adequately pass the intended loads because of width restrictions.

2. Upgrade and stabilize the road for year-round operation. This alternative was not evaluated because it was not proposed, however, if operation extends past October 1, this may be necessary.

B. Considered and Evaluated

1. Improve the road from the Forest boundaries between the Fishlake and Manti-LaSal to the drill site with the addition of gravel to provide a defined roadway, a cushion and leveling course for driveability, reduce dust and stabilize surfacing losses for a dry season operation.

    a. Improve horizontal alignment, and vertical alignment on first 0.2 mile.

b. Replace culvert at M.P. 3.65.

c. Replace cattleguards at M.P. 0.0, M.P. 1.6, M.P. 4.10, and 4.15, and widen bypass gates to 16 footers.

d. Ramp over culvert at M.P. 0.9.

2. Spot improvements on road from Forest boundary between Fishlake and Manti-LaSal to drill site for dry season operations with restrictions to movement of heavy drill traffic (other than passenger or pickup) during inclement weather and the big game hunting seasons.

a. Improve horizontal alignment and vertical alignment on first 0.2 mile.

b. Replace culvert at M.P. 3.65.

c. Ramp over culverts at M.P. 0.9.

d. Replace cattleguards at M.P. 00, M.P. 4.10 and 4.15, and widen gates to 16 footer.

e. Widen gate bypass gate on cattleguard at M.P. 1.6.

IV. EFFECTS OF IMPLEMENTATION

The short duration use of the Quitchumpah road, the Link Canyon road, and an unspecified road for exploration drilling with air-mist, to a depth of 5,700 feet, will have a short-lived and slight impact to the road system and adjacent resources if exploration traffic is limited to the dry season, the traffic is restricted to the present roadway and heavy load vehicles prohibited from movement during big game seasons.

Reconstruction is needed from the cattleguard at the boundary between the Fishlake and Manti-LaSal National Forests for the first 0.2 miles of the Quitchumpah road. The horizontal and crest curve combination on the ridge should be designed with adequate turning radius for heavy trucks (100 feet desirable), and adequate inside curve widening for heavy trucks and turnout storage (10 feet wide) on the outside of curve. Any excess excavation should be used to reduce the pitch between Quitchumpah Creek and the small ridge.

The existing fords have rock bottoms and would be difficult to culvert without constructing extensive ramps or excavating in bedrock. Culverts at these locations would require continued maintenance because of sediments

and grade. The fords adequately carry the present traffic and could accommodate the exploration traffic. A culvert at M.P. 3.65 which serves the stock water pond in the northeast corner of Section 21, needs to be replaced and an adequate cover provided so that the system continues to function.

Additional soil losses could occur from areas adjacent to the roadway if exploration traffic use is not restricted to the existing road. Because of the lack of cover on cap rock, there would be a tendency to leave the existing roadway for a more comfortable or driveable surface. Turnouts also need to be identified on the ground to prevent damage by indiscriminant pull-offs during passing. By graveling the entire roadway with a cushion or riding surface, these losses could be reduced because the traffic would have a well-defined and driveable driving surface.

The major use of the road system is during the big game hunting season. Conflicts with this existing use and the need to construct to a higher standard can be corrected by prohibiting the move-out of the drill rig or other equipment during these seasons.

The existing cattleguards and bypass gates are of inadequate width to pass the drilling equipment. Either the bypass gates need to be widened to 16 feet and/or the cattleguards replaced. The replacement of the cattleguards has been on the maintenance schedule and the materials (cattleguards and bases) are on hand. In order to avoid open gates and extensive bypass road construction at the cattleguards on curves or at fence corners, the installation of the new cattleguards should be required.

If the well goes into the development stage, the road will require upgrading to a higher standard.

V. EVALUATION OF ALTERNATIVES

Alternative 2 provides for the least movement of traffic, and the least total cost of transportation, while providing a safe, stable facility for the intended traffic. It also allows the completion of the remainder of the transportation system by the installation of the larger cattleguards.

Alternative 1 would provide for stabilization and improved rideability on the road system by placement of a running surface. The total cost of transportation would be higher because of the high cost to obtain and transport gravel and the light use expected.

VI. SELECTION OF PREFERRED ALTERNATIVE

The preferred alternative is to reduce total transportation cost by limiting use to dry season and reduce impacts to other users by prohibiting heavy haul during big game seasons. The first 0.2 mile of road #50007 will be reconstructed to adequately handle exploration traffic, and drainage will be improved by replacing culvert at M.P. 3.65. Allotment management and traffic movement will be improved by replacing narrow cattleguards with 16 foot cattleguards and gates. Stabilization of riding surface will be with water and grading rather than surface gravel. Turnouts for use will be identified on the ground.

U. S. GEOLOGICAL SURVEY - CONSERVATION DIVISION

FROM: : DISTRICT GEOLOGIST, ME, SALT LAKE CITY, UTAH

TO : DISTRICT ENGINEER, O&G, SALT LAKE CITY, UTAH

SUBJECT: APD MINERAL EVALUATION REPORT LEASE NO. U-15179

OPERATOR: Vortt Exploration. WELL NO. 1

LOCATION: SE¼ SW¼ SE¼ sec. 23, T. 21S, R. 5E, SLM

Sevier County, Utah

---

1. Stratigraphy:

Mesaverde	surface
Mancos	~1200'
Ferron	~4410'
Dakota	~5450'
TD	5700'

2. Fresh Water:

Fresh water may be present from surface to Mancos.

3. Leasable Minerals:

Coal: Mesaverde (~800' to ~1000').

Oil/Gas: Ferron, Dakota

4. Additional Logs Needed:

Include a gamma ray log through coal zone regardless of whether the Intermediate string is set before logging.

5. Potential Geologic Hazards: None expected

6. References and Remarks:

Signature: Gregory W. Wood Date: 6-16-81

Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [X]

2. NAME OF OPERATOR
VORIT EXPLORATION COMPANY, INC.

3. ADDRESS OF OPERATOR
P. O. Box 26089, Fort Worth, Texas 76116

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
~~1708.99'~~ 1709 FEL ~~415.6'~~ 416 FSL SWSE
At proposed prod. zone
1708.99' FEL 415.6' FSL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
approximately 5 miles NW Emery, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 415.60'

16. NO. OF ACRES IN LEASE: 2560

17. NO. OF ACRES ASSIGNED TO THIS WELL: 320

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: ------

19. PROPOSED DEPTH: 5700'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
8640' GL

22. APPROX. DATE WORK WILL START*
September 10, 1981

5. LEASE DESIGNATION AND SERIAL NO.: U-15179
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT AGREEMENT NAME: Link Canyon
8. FARM OR LEASE NAME: 23215
9. WELL NO.: 1
10. FIELD AND POOL, OR WILDCAT: Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 23, T21S, R5E, SLB & M
12. COUNTY OR PARISH: Sevier
13. STATE: Utah

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 3/4"	10 3/4"	40.5#	200'	100 sacks circ to surf.
9 5/8"	7 7/8"	26.40#	2400' if needed	125 sacks
6 1/4	4 1/2"	10.50#	5700'	175 sacks

Selectively perforate and fracture the Ferron and Dakota Formations with 20,000 gal. of jelled weak acid and 200 sacks of 20-40 sand.

This gas is not dedicated.

The E/2 of Section 23 is dedicated to this well.

A 3000 psi working pressure and 5000 psi test blowout preventer will be used. Diagram attached hereto.

RECEIVED
SEP 21 1981
DIVISION OF
OIL, GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.
SIGNED H. E. PATTERSON TITLE LAND MANAGER DATE 6-12-81

(This space for Federal or State office use)

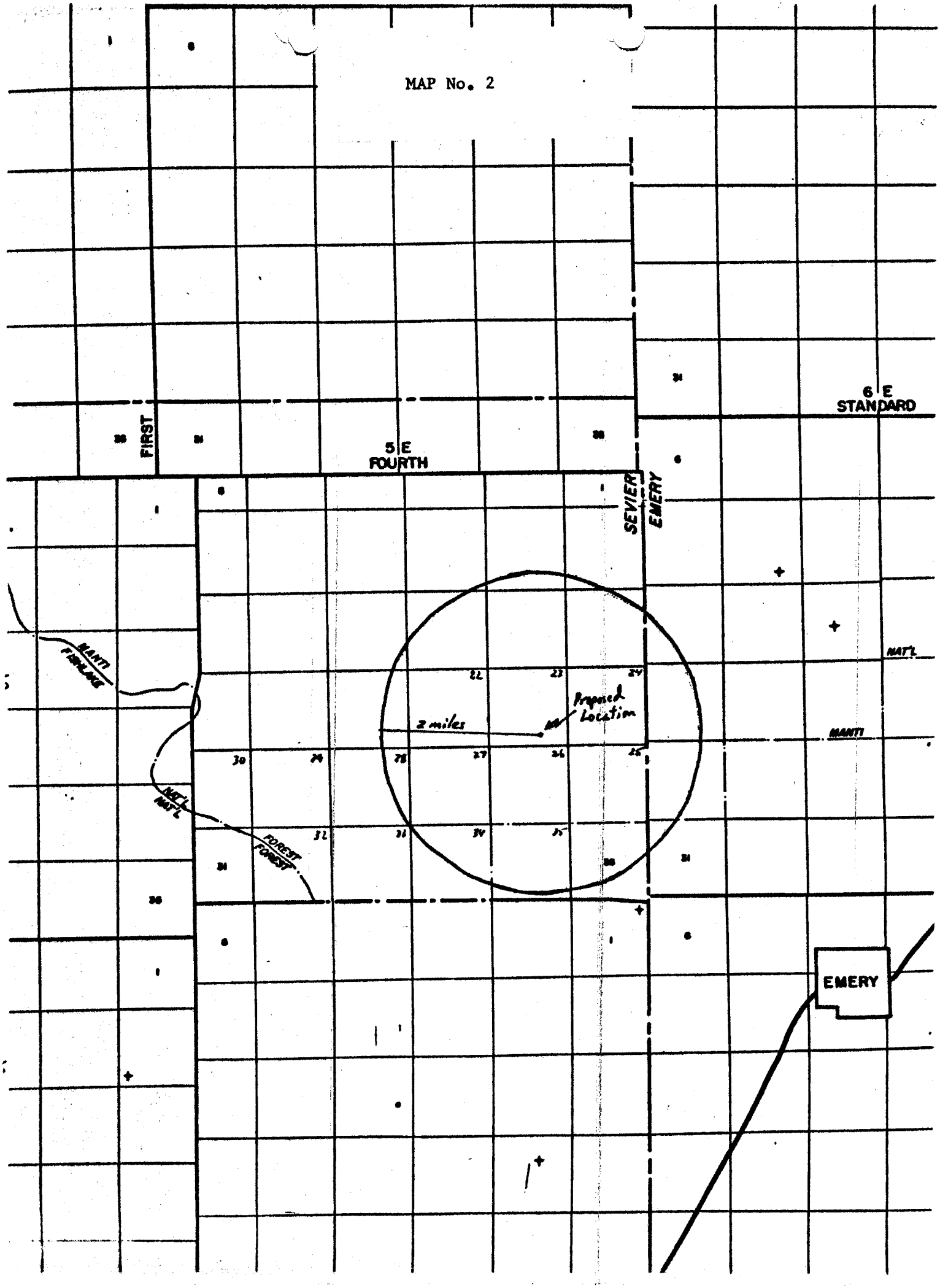
PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:

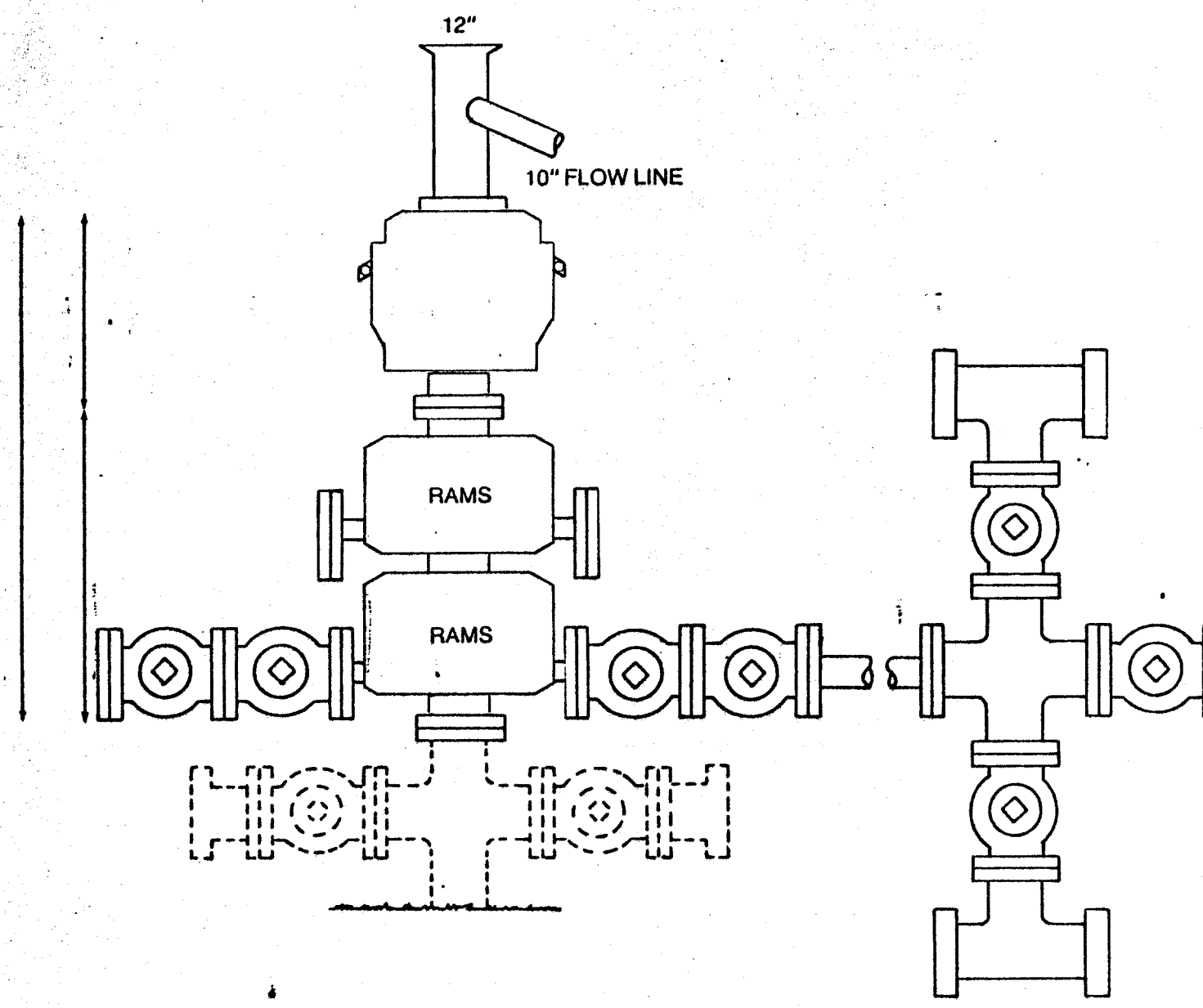
APPROVED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 10-15-81
BY: M. J. Minder

MAP No. 2


FIRST
5 E
FOURTH
6 E
STANDARD
SEVIER
EMERY
MANTI
FISHLAKE
NAT'L
FOREST
Proposed
Location
2 miles
MANTI
EMERY

BOP AND CHOKE MANIFOLD

CRC COLORADO WELL, INC.
2603 East Main • Rangely, Colorado 81648



SERIES 10" X 3000 with positive and adjustable choke

VORTT EXPLORATION COMPANY, INC.

OIL AND GAS

(817) 244-4901
P. O. Box 26069

2728 Laredo Drive
Fort Worth, Texas 76116

TEN POINT OPERATIONS PLAN

LINK CANYON UNIT - WELL NO. 23215

1. The geologic name of the surface formation is the Mesa Verde Sand of the Upper Cretaceous.

2. Estimated tops of important geologic markers.

Ferron: 4410'
Dakota: 5450'

3. Due to lack of information in the area, we are unable to estimate what depth water would be encountered. Gas and/or oil is expected to be encountered based on porosity development in the Ferron from 4440' to 4850' and in the Dakota from 5475' to 5575'.

4. Proposed casing program:

10 3/4" to 200' of 32.75# New
7 5/8" to 2400', if needed, of 26.40# New
4 1/2 to Total Depth of 10.50# New

5. A 3000 psi working pressure and 5000 psi test rating. Equipment includes a 5 valve choke manifold with a postive and adjustable choke; kill line will be provided at all times.

6. The proposed well is to be drilled with air. If water is encountered, we will go to mist drilling or aerated drilling by injecting drilling soap into the system. This process can handle in excess of 100 barrels of formation water per hour. If conditions encountered in the hole force us to go to mud, we would use freshwater mud with Gel for viscosity and Bar for weight. The viscosity and weight of such mud would be governed by hole conditions.

7. Auxiliary equipment will include: (1) 6 5/8" left hand kelly cock, (2) floats at the bit, (3) floor safety valve at all times for drill pipe.

8. As many as three drill stem tests could be run in the hole during the course of drilling, depending on the quality of the formation to be tested. There will not be any coring in this hole. If no intermediate casing is run, the well will be logged from Total Depth back to surface casing when drilling is completed. If an intermediate string of casing is run, a cased hole log will be run thru pipe from the bottom of the intermediate

string to the surface. Logs to be run will include dual induction, density and cement bond logs.

9. It is not anticipated that any pressures, temperatures or hazardous gases will be encountered at this location. If any were encountered, they could be controlled by the BOP.

10. Anticipated starting date is July 10, 1981. Duration of operations should be no more than 18 days maximum.

VORTT EXPLORATION COMPANY, INC.

OIL AND GAS

(817) 244-4201
P. O. Box 26089

2728 LAREDO DRIVE
FORT WORTH, TEXAS 76116

MULTI-POINT SURFACE USE PLAN

LINK CANYON UNIT-WELL NO. 23215

1. EXISTING ROADS Please refer to Map No. 1 which shows the existing roads. New roads which will be required have been marked on this map. All existing roads within a 3 mile radius of this exploratory well are basically gravel or dirt surface roads with bedrock underlying most of the road about 3-5 inches from the surface. In the event of production, existing roads will be maintained according to the type of vehicles that will be used. No oil is anticipated, therefore we expect to have only four wheel drive or small size vehicles using the road, once or twice a week. Pit run gravel will be used on the road where graveling is deemed necessary. All roads will be graded periodically during the duration of this project according to necessity. It is not anticipated that any existing roads will need to be widened. In the event of a dry hole, the existing roads will be left in as near a condition as they were found, except where they have been improved.

2. PLANNED ACCESS ROADS Please refer to Map No. 1. The local terrain at the wellsite is flat, therefore the grade of our proposed 150' new access road will be flat. The road surface will not exceed 20' in width. No turnouts will be necessary. The drainage design will be adequate to prevent any soil erosion and will consist of ditches and possible water bars or culverts. There will be no major cuts or fills on this new access road. It cannot be determined if a culvert will be needed on the access road until actual road construction takes place. No gates, cattle guards or fence cuts will be necessary on the planned access road. The surfacing material for the planned access road will be 6" of pit run gravel, which will be brought from off the forest. The road will be center line flagged for convenience.

3. LOCATION OF EXISTING WELLS Please refer to Map No. 2. There are no water wells within a two mile radius of location. There are no abandoned wells within a two mile radius of location. There are no temporarily abandoned wells within a two mile radius of location. There are no disposal wells within a two mile radius of location. There are no drilling wells within a two mile radius of location. There are no producing wells within a two mile radius of location. There are no shut-in wells within a two mile radius of location. There are no injection wells within a two mile radius of location. There are no monitoring or observation wells for other resources within a two mile radius of location.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES There are no tank batteries within a one mile radius of location. There are no production facilities within a one mile radius of location. There are no oil

gathering lines within a one mile radius of location. There are no gas gathering lines within a one mile radius of location. There are no injection lines within a one mile radius of location. There are no disposal lines within a one mile radius of location. Since there are no lines there, none of them are buried. In the event of production of gas, we would propose to lay a gas gathering line as shown on Map No. 1 attached hereto. We do not feel it necessary to go to the expense of having this proposed gas line surveyed unless production is secured. In the event condensate is produced in conjunction with the gas, a 250-300 barrel tank battery would be placed at the wellsite. A separator would also be placed at the wellsite. The location production equipment will be painted according to Forest Service requirements. It is proposed that the gas gathering line would not be buried, allowing for easy removal upon completion of production. The gas line would be buried near roads. The flow line route will be flagged on the ground as required. The location will not exceed 300' square as shown on the attached Plat No. 1. Construction methods and materials will be based on Forest Service regulations, meaning we will use 12 inches of pit run gravel on the location. Cuts and fills will be made as shown on Plat No. 1. The location will be fenced during drilling operations as will any production facilities. Plans for rehabilitation of disturbed areas no longer needed will include filling and relevelling all pits when fluids have had adequate time to dry. These areas will be reseeded according to Forest Service requirements.

5. LOCATION AND TYPE OF WATER SUPPLY Due to the fact we will be drilling with air, water usage will be limited. Any water used would be brought by truck from Quitchipah Creek. We are in the process of acquiring permission or authorization to use this water from the local irrigation co-op and therefore cannot furnish such at this time. No water wells are to be drilled upon this location.

6. SOURCE OF CONSTRUCTION MATERIALS Pit run gravel will be used to build the location and the entrance to the location. No additional materials will be needed for the existing roads. The planned new access road and the location will be built with pit run gravel that will be brought by truck from sources off of the Forest Service property. The gravel will not be brought from either Federal or Indian land. All gravel will be brought to location via the access roads marked on Map No. 1 attached hereto. No other Federal or Indian lands will be used.

7. METHODS FOR HANDLING WASTE-DISPOSAL All cuttings, drilling fluids and produced fluids will be placed in the blow pit during drilling operations. All trash will be kept in a fenced pit and removed from the forest periodically. No trash will be left or buried at the location. A port-a-potty will be provided for human waste. The port-a-potty will be removed from the location upon completion of drilling operations.

The well site area will be cleaned to the best of our ability once the drilling rig moves out. If large amounts of liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying any of these materials into the watershed. No earthen pit will be located on natural drainage; all earthen pits will be so constructed as to prevent leakage from occurring.

8. ANCILLIARY FACILITIES No camps or airstrips will be associated with this project except for a small house trailer to be used by drilling and geological consultants.

9. WELL SITE LAYOUT Please refer to Plat No. 1. A cross section of the drill pad is not necessary due to the fact the location is on a flat area. The cuts and fills will be minor but are shown on Plat No. 1. All mud tanks, reserve, burn and trash pits, pipe racks, living facilities, and soil material stockpiles will be located as shown on Plat No. 1. Rig orientation, parking areas and access roads will be located as shown on Plat No. 1. All earthen pits will be lined with a polyurethane liner.

10. PLAN FOR RESTORATION OF SURFACE After completion of the proposed project, the location will be returned to as near a condition as which it was found. All pits will be backfilled as soon as possible. No contouring will be necssary due to the flat terrain and the fact that it detracts from the natural beauty of the forest. Fluids that will not dry will be removed from the forest. All polluting substances or contaminated materials, such as oil, oil saturated soils, and gravels, will be buried with a minimum of two feet of clean soil as cover or be removed from the forest. Drainage will be reestablished to prevent erosion to the site until vegetation is established. Reseeding operations will be carried out according to Forest Service regulations. Reseeding will be performed as soon as the surface can be made ready. All pits will be fenced until they are ready to be leveled and filled. Any oil left on the pit will be removed from the forest. All rehabilitation operations should be completed within 60 days after the completion of operations, weather permitting.

11. OTHER INFORMATION The terrain is rolling juniper hills with open sagebrush flats containing many rocks and some gullies. There is a scattering of timber. Deer and elk have been known to use this area during certain months of the year. Other animals such as rabbits, ground squirrels, mice, cougars and eagles are also present in the general area. The area is used during the summer months by campers and sightseers. For archeological information, please see attached Report No. 1. The soil at the well site is derived from limestone and sandstone. The surface

of all involved lands is Manti La Sal Forest lands. There is some hunting activity in the area during certain times of the year. The closest body of water is Acord Lakes, several miles from this location. The closest streams would be Muddy Creek to the North and Quitchipah Creek to the West, both over two miles from the location. There are no known occupied dwellings within a 10 (ten) mile radius of location.

12. OPERATOR'S REPRESENTATIVES

Jim Davis	and	H. E. Patterson
c/o Village Inn Motel		P.O. Box 26089
Castledale, Utah 84513		Fort Worth, Texas
(801) 748-2309		(817) 244-4201

13. CERTIFICATION I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in their plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Vortt Exploration Company, Inc. and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

H. E. Patterson
Land Manager

HEP/ck

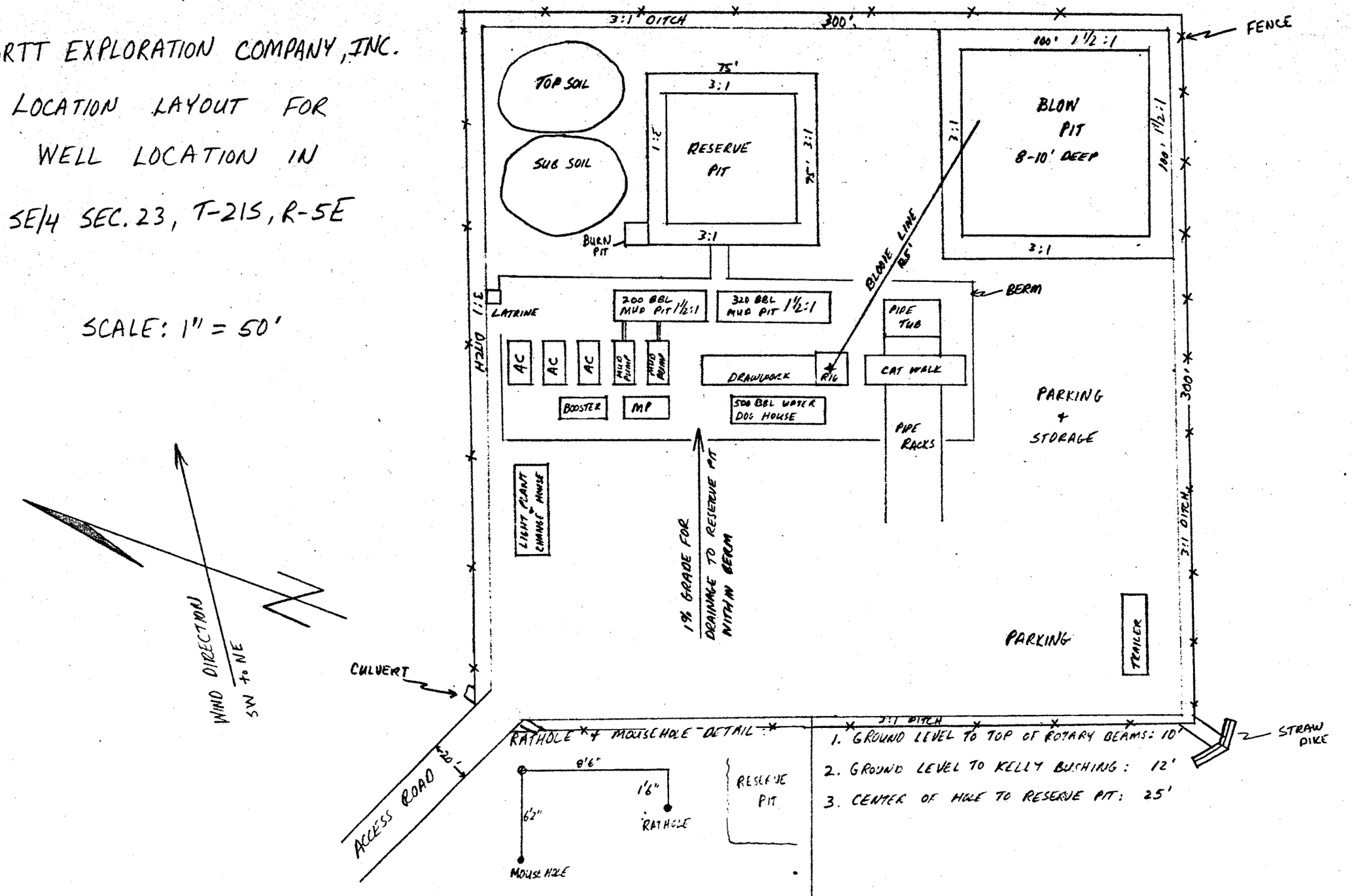
VORTT EXPLORATION COMPANY, INC.

LOCATION LAYOUT FOR

WELL LOCATION IN

SE/4 SEC. 23, T-21S, R-5E

SCALE: 1" = 50'



PLAT NO. 1

REPORT #1

UTAH ARCHAELOGICAL RESEARCH CORPORATION • 87 E. CENTER, SUITE 103 • SPANISH FORK, UTAH 84660 • (801) 798-7061
FIELD OFFICE: P.O. BOX 1147 • MONTICELLO, UTAH 84535

SUBJECT: Archaeological Survey of a Well Location in The Pines, Manti-LaSal National Forest, Utah

AUTHOR: Diana Christensen
Principal Investigator

DATE: June 1, 1981

PROJECT: Vortt Exploration Corporation-81-1

PERMIT: Utah State #612
Forest Special Use Permit

PREPARED FOR:

Mr. Ed Patterson
Vortt Exploration Corporation
P.O. Box 26089
Fort Worth, TX 76116

Dr. David Madsen
Utah State Historical Society
300 South Rio Grande
Salt Lake City, UT 84101

Mr. Steve Robinson
Ferron Ranger District
P.O. Box 129
Ferron, UT 84523

ARCHAEOLOGICAL SURVEY OF A WELL LOCATION IN THE PINES, MANTI-LaSAL NATIONAL FOREST, UTAH

ABSTRACT: On May 29, 1981, an archaeological survey was conducted for a proposed oil well in the Ferron District of the Manti-LaSal National Forest, Sevier County, Utah. An access road to the area was checked for archaeological resources along with the well site itself.

CLIENT: Vortt Exploration Corporation

PROJECT AREA:

a. Legal Location: T21S, R5E, Section 23, SE¼
b. Map: Emery West 7.5' 1979
c. Sevier County, Utah
d. Forest land, Manti-LaSal National Forest, Ferron District
e. Access road of approximately 1/8 mile long and the well pad 300' x 200' were surveyed

DATE OF FIELDWORK: May 29, 1981

PERSONNEL INVOLVED: Diana Christensen

RESULTS AND RECOMMENDATIONS: No archaeological resources were encountered. Clearance is recommended for this well pad and access road.

ARCHAEOLOGICAL SURVEY OF A WELL LOCATION IN THE PINES, MANTI-LaSAL NATIONAL FOREST, UTAH

INTRODUCTION

On May 29, 1981, Diana Christensen of Utah Archaeological Research Croporation conducted an archaeological survey of a proposed well location in Township 21 South, Range 5 East, Section 23, SE¼ of Sevier County, Utah. The proposed oil well will be located on forest lands of the Manti-LaSal National Forest, Ferron District. An access road which had previously been staked was located in the SW¼ of the same section (23) and was also surveyed for archaeological resources. The road was approximately 1/8 mile long and a 300' by 200' area around the well location was also surveyed for archaeological resources.

ENVIRONMENTAL SETTING

The area in which the well location is proposed is approximately 8640 feet in elevation and is located on a mesa top above Muddy Creek and Link Canyon.

The area is open and is located in a large sage park with surrounding Quaking Aspen groves and Ponderosa Pine trees. Fauna observed in the area were deer, squirrels, and various birds.

The soils are sandy and areas of exposed sandstone are visible. The land is in excellent condition.

The nearest water is a spring located at the head of Link Canyon which is approximately 3/4 mile from the well location.

FILE SEARCH

A file search of previously recorded archaeological sites and projects in the area was conducted at the Ferron District Office and the Utah State Historical Society in Salt Lake City, Utah. A previously recorded archaeological site, 42 Sv 501, is located in a minor tributary wash at the head of Link Canyon (T21S, R5E, Section 23 SW¼ of SW¼). This site will not be affected by the proposed well location or access road.

METHODOLOGY

The access road was checked by the archaeologist walking up one side and back the other, clearing a corridor approximately 50 feet wide. The well location was traversed in approximately 20 meter intervals until an area of 300' by 200' had been cleared.

The day was clear and access roads were dry to the area.

Approximately three hours were spent examining the area for archaeological resources along with three hours travel time.

RESULTS AND RECOMMENDATIONS

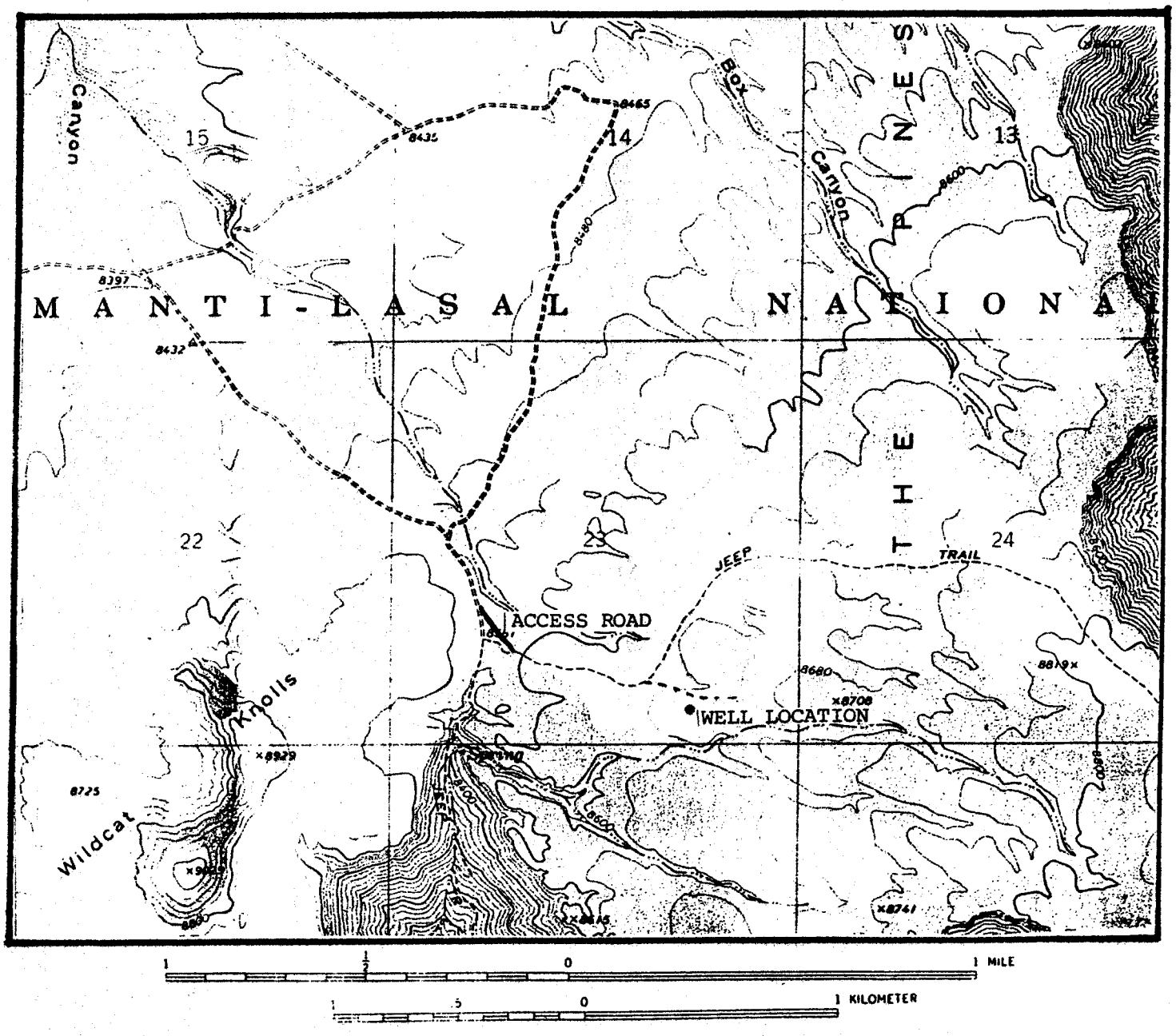
No archaeological resources were encountered along the access road or the well location. A previously recorded archaeological site (42 Sv 501) will not be affected by the project. It is recommended that clearance be given with the following stipulations;

1. All construction activities should be limited to those areas examined during the survey.
2. A qualified archaeologist should be notified if construction activities disturb any subterranean cultural remains during the course of the project.

Diana Christensen,

UTAH ARCHAEOLOGICAL RESEARCH CORPORATION
87 E. Center, Suite 103
Spanish Fork, Utah 84660
Tel. (801) 798-7061

Archaeological Consultants



T 21 South R 5 East Section 23, SE¼

UTM Zone 12 N 4313500 E 472400

County: Sevier

Project: Vortt Exploration-81-1

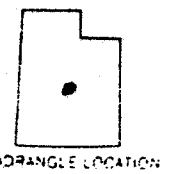
Quad: Emery West 7.5'

Date:

Legend: — access road

● well location

North



** FILE NOTATIONS **

DATE: October 15, 1981

OPERATOR: Voit Exploration Company, Inc.

WELL NO: Link agn. # 23215 # 1

Location: Sec. 23 T. 21S R. 5E County: Sevier

File Prepared: ✓ Entered on N.I.D: ✓

Card Indexed: ✓ Completion Sheet: ✓

API Number 43-041-30024

CHECKED BY:

Petroleum Engineer: M. J. Minder 10-15-81

Director:

Administrative Aide: Unit Well, ok on boundaries

APPROVAL LETTER:

Bond Required: ☐ Survey Plat Required: ☐

Order No. _____ O.K. Rule C-3 ☐

Rule C-3(c), Topographic Exception - company owns or controls acreage within a 660' radius of proposed site ☐

Lease Designation ☐ Plotted on Map ☐

Approval Letter Written ☐

Hot Line ☐ P.I. ☐

Form 9-331
Dec. 1973

Form Approved.
Budget Bureau No. 42-R1424

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☐ gas well ☐ other Dry Hole
2. NAME OF OPERATOR
Vortt Exploration Company, Inc.
3. ADDRESS OF OPERATOR
Fort Worth, TX 76116
4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE:
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH: 5730

5. LEASE
U-15179
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
Link Canyon
8. FARM OR LEASE NAME
23215
9. WELL NO.
1
10. FIELD OR WILDCAT NAME
Wildcat
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 23, T21S, R5E, S2B & M
12. COUNTY OR PARISH
Sevier
13. STATE
Utah
14. API NO.
15. ELEVATIONS (SHOW DF, KDB, AND WD)
8640' GL 8653' DF, KDB8654

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:
TEST WATER SHUT-OFF	☐	☐
FRACTURE TREAT	☐	☐
SHOOT OR ACIDIZE	☐	☐
REPAIR WELL	☐	☐
PULL OR ALTER CASING	☐	☐
MULTIPLE COMPLETE	☐	☐
CHANGE ZONES	☐	☐
ABANDON*	☒	☐
(other)		

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Notice of Intent to Plug and Abandon. Clean the hole out to TD 5730. Requested plugging instructions from Mr. Ed Guynn 10-09-81. Plugs to be set as follows: 5100-5300, 2700-2900, 1500-1700, 225-325 and 10 set at surface with markers. When rig is moved off location, will clean location and start rehab.

APPROVED BY THE DIVISION OF OIL, GAS, AND MINING
DATE: 12-2-81
BY: M. J. Minder

RECEIVED
OCT 19 1981
DIVISION OF OIL, GAS & MINING

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct
SIGNED Howard L. Wagner TITLE Production Manager DATE October 15, 1981

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

October 19, 1981

Vortt Exploration Company, Inc.
P. O. Box 26089
Fort Worth, Texas 76116

RE: Well No. Link Canyon 23215 #1,
Sec. 23, T. 21S, R. 5E,
Sevier County, Utah

Insofar as this office is concerned, approval to drill the above referred to gas well is hereby granted in accordance with Section 40-6-11, Utah Code Annotated 1953; and predicated on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

MICHAEL T. MINDER - Petroleum Engineer
Office: 533-5771
Home: 876-3001

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (acquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-041-30024.

Sincerely

DIVISION OF OIL, GAS AND MINING

Cleon B. Feight
Director

CBF/db
CC:USGS

VORTT EXPLORATION COMPANY, INC.
OIL AND GAS

(817) 244-4201
P. O. Box 26089

2728 Laredo Drive
Fort Worth, Texas 76116

December 21, 1981

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1588 West North Temple
Salt Lake City, Utah 84116

Re: Form OGC-8-X for
Indian Creek 02176 #1
Indian Creek 14176 #1
Link Canyon 23215 #1
Water Analysis for
Indian Creek 14176 #1

Gentlemen:

Enclosed please find the report of water encountered while drilling the above referenced wells, and also the water analysis for the Indian Creek 14176 #1 well.

Please feel free to contact us for any additional information.

Sincerely,

VORTT EXPLORATION COMPANY, INC.

Howard Wagner
HOWARD L. WAGNER
Production Manager

HLW:lc

Enclosures

56 64 03

FILE IN TRIPLICATE
FORM OGC-8-X

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1588 West North Temple
Salt Lake City, Utah 84116

RECEIVED
DEC 30 1981
DIVISION OF
OIL, GAS & MINING

REPORT OF WATER ENCOUNTERED DURING DRILLING

Well Name & Number Link Canyon 23215 #1

Operator Vortt Exploration Co., Inc. Address P. O. Box 26089, Fort Worth TX 76116

Contractor Laredo Drlg. Co. #9 Address Duchesne, Utah

Location SW ¼ SE ¼ Sec. 23 T. 21S R. 5E County Savier

Water Sands

	Depth		Volume	Quality
	From	To	Flow Rate or Head	Fresh or Salty
1.	NONE			
2.				
3.				
4.				
5.				

(Continue of reverse side if necessary)

Formation Tops

Remarks

NOTE: (a) Report on this form as provided for in Rule C-20, General Rules and Regulations and Rules of Practice and Procedure.

(b) If a water analysis has been made of the above reported zone, please forward a copy along with this form.

PROPERTY DESCRIPTION:

VORTT U. 15179

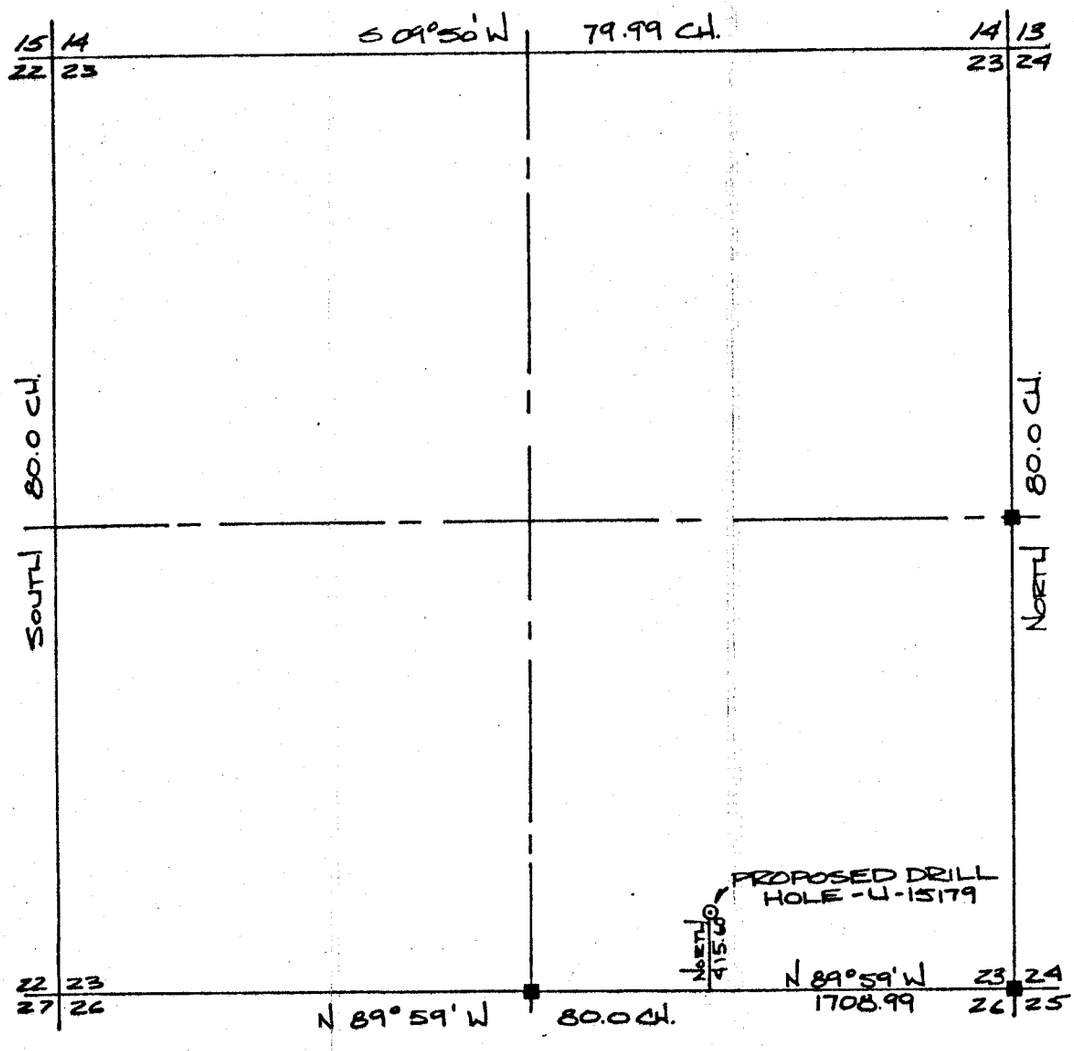
LOCATED AT A POINT N 89°59' W, 1708.99 FEET AND 415.60 FEET NORTH OF THE SE CORNER OF SECTION 23, T. 21 S., R. 5 E., SLB&M.

■ DENOTES FOUND CORNER

CERTIFICATE

I, Craig E. Johansen, A LICENSED SURVEYOR, CRAIG E. JOHANSEN HOLDING CERTIFICATE NO. 3826, DO HEREBY CERTIFY THAT THE PLAT SHOWN HEREON HAS BEEN PREPARED FROM A FIELD SURVEY MADE UNDER MY DIRECTION AND CORRECTLY SHOWS THE DIMENSIONS AND MONUMENTS OF THE PROPERTY DESCRIBED TO THE BEST OF MY KNOWLEDGE AND BELIEF. FURTHERMORE, ENCROACHMENTS OF FENCES AND IMPROVEMENTS ARE SHOWN WITH THE FOLLOWING EXCEPTIONS: none

REGISTERED LAND SURVEYOR
CRAIG E. JOHANSEN
3826
STATE OF UTAH



SECTION	TOWNSHIP	RANGE
23	21 S.	5 E.
DATE	SCALE	BLOCK
4-81	1" = 1000'	
PLAT	SURVEY	

CRAIG E. JOHANSEN
REGISTERED LAND SURVEYOR
JOHANSEN & TUTTLE ENGR. INC.
CASTLE DALE, UTAH

SURVEY FOR
VORTT EXPLORATION COMPANY, INC.
2728 LAREDO DR.
FORT WORTH, TEXAS 76116

STATE OF UTAH
NATURAL RESOURCES & ENERGY
Oil, Gas & Mining

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

Scott M. Matheson, Governor
Temple A. Reynolds, Executive Director
Cleon B. Feight, Division Director

May 6, 1982

Vortt Exploration Company
P. O. Box 26089
2728 Laredo Drive
Fort Worth, Texas 76116

Re: Well No. Link Canyon 23215 #1
Sec. 23, T. 21S, R. 5E.
Sevier County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log on the above mentioned well is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and forward them to this office as soon as possible.

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS AND MINING

Cari Furse

Cari Furse
Clerk Typist

VORTT EXPLORATION COMPANY, INC.

OIL AND GAS

(817) 244-4201
P. O. Box 26089

2728 Laredo Drive
Fort Worth, Texas 76116

June 14, 1982

Ms. Cari Furse
STATE OF UTAH
NATURAL RESOURCES & ENERGY
OIL, GAS & MINING
4241 State Office Building
Salt Lake City, Utah 84114

RE: Well No. Link Canyon 23215-1
Sec. 23, T21S, R5E
Sevier County, Utah

Dear Ms. Furse:

Please find enclosed the Well Completion Report Form OGC-3 in duplicate along with well logs.

If you need further information please let me know.

Very truly yours,

VORTT EXPLORATION COMPANY, INC.

Larry Watts

Larry Watts
Project Manager

IW/ck

encl. as stated

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5

15

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: U-15179

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ DRY ☒ Other DRY HOLE

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

7. UNIT AGREEMENT NAME: Link Canyon

8. FARM OR LEASE NAME: #23215

2. NAME OF OPERATOR: VORTT EXPLORATION CO., INC.

9. WELL NO.: #1

3. ADDRESS OF OPERATOR: P.O. Box 26089, Fort Worth, Texas 76116

10. FIELD AND POOL, OR WILDCAT: Wildcat

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface 1709 FEL 566' FSL
At top prod. interval reported below 416 FSL
At total depth 1709 FEL 566' FSL

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 23, T21S, R6E, SLB & M

14. PERMIT NO.: 43-041-30024 DATE ISSUED: 10-15-81 Oct. 19, 1981

12. COUNTY OR PARISH: Sevier 13. STATE: Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
9-17-81	10-10-81	--	8640'GL	--

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5730	--	--	→	All	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: DRY

25. WAS DIRECTIONAL SURVEY MADE: Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN: Dual Induction - Density Neutron

27. WAS WELL CORED:

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
10 3/4"	40.5	200'	12 3/4"	100 sacks	-0-

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)
		NONE		

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
	NONE	

31. PERFORATION RECORD (*Interval, size and number*): NONE

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
NONE	NONE

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Larry Watts LARRY WATTS TITLE Project Manager DATE 6/14/82

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE-VERT. DEPTH
Black Hawk	274'	
Star Point	622'	
Upper Mancos	1125'	
Emery	2077'	
Ferron	4605'	

U.S. GOVERNMENT PRINTING OFFICE 943—16—83828p-1